

**CLAIMS.**

1. A device for lighting at least one light emitting diode (LED) to be supplied with predefined minimum forward voltage and maximum current, comprising:
  - voltage supply means for supplying voltage to the light emitting diode,
  - a pulse generator for generating a cyclic pulse signal having predefined on-times and off-  
5 times,
  - a switch controlled by the pulse generator to be turned on during said on-times to short-circuit the light emitting diode and turned off during said off-times,
  - an inductive device for being charged when the switch is turned on and for increasing the forward voltage over the light emitting diode when the switch is turned off.
- 10 2. A device as claimed in claim 1, comprising a diode before the light emitting diode to prevent the voltage over the light emitting diode from going down to zero.
3. A device as claimed in claim 1, wherein the inductive device is a coil having an inductance defined by the number of light emitting diodes and their maximum current and voltage requirements as well as the available frequency of the pulse generator.
- 15 4. A device as claimed in claim 1, wherein the cyclic pulse signal has a frequency from 0.1 kHz to 30 Mega hertz.
5. A device as claimed in claim 1, wherein the pulse generator is a pulse width modulation generator.
6. A device as claimed in claim 1, wherein the switch is a MOS FET or an NPN bipolar.
- 20 7. A battery-supplied apparatus comprising a display and a device as claimed in claim 1 for backlighting said display.
8. A method of lighting at least one light emitting diode to be supplied with predefined minimum forward voltage and maximum current, comprising the steps of:
  - supplying a forward voltage to the light emitting diode,
  - generating a cyclic pulse signal having predefined on-times and off-times for controlling a switch to be turned on during said on-times to short-circuit the light emitting diode and turned off during said off-times,

- charging an inductive device when the switch is turned on,
- increasing the forward voltage over the light emitting diode when the switch is turned off so that said forward voltage gets higher than the minimum forward voltage.